

WHAT IS CLAIMED IS

1. A thin film transistor array substrate  
5 comprising:
  - an insulating substrate;
  - a thin film transistor arranged in a part of a pixel area on the insulating substrate;
  - an auxiliary capacitor having an auxiliary  
10 capacitor electrode arranged in the pixel area and an opposite electrode facing the auxiliary capacitor electrode via an insulating layer, the opposite electrode being located in the same layer as a source electrode and a drain electrode of the thin  
15 film transistor; and
    - a pixel electrode formed in the pixel area, wherein the opposite electrode is divided into two or more sections, and each of the sections is electrically connected to the pixel electrode via a  
20 contact hole.
- 25 2. The thin film transistor array substrate according to claim 1, wherein one of the divided sections of the opposite electrode is connected to the source electrode of the thin film transistor via a connection located in the same layer as the  
30 opposite electrode and the source electrode.
- 35 3. The thin film transistor array substrate according to claim 1, wherein the pixel electrode has a shape defining orientation of liquid crystal,

and the electrical connection extends along a boundary between domains with different orientations of the liquid crystal.

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4. The thin film transistor array substrate according to claim 2, wherein the source electrode, the connection, and said one of the divided sections of the opposite electrode are integrally formed of the same material.

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5. The thin film transistor array substrate according to claim 3, wherein the pixel electrode has a shape with branches extending to the left and right, and the electrical connection extends along a center line of the pixel electrode.

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6. A thin film transistor array substrate comprising:  
an insulating substrate;  
a thin film transistor arranged in a part of a pixel area on the insulating substrate;  
an auxiliary capacitor having an auxiliary capacitor electrode arranged in the pixel area and an opposite electrode facing the auxiliary capacitor electrode via an insulating layer, the opposite electrode being located in the same layer as source and drain electrodes of the thin film transistor;  
a connection located in the same layer as the

source electrode and the opposite electrode and  
extending between the source electrode and the  
opposite electrode; and

5 a pixel electrode formed in the pixel area,  
wherein the opposite electrode is electrically  
connected to the pixel electrode via a contact hole.

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7. A method for repairing a thin film transistor  
array substrate, comprising the steps of:

forming a plurality of pixels on an insulating  
substrate, each pixel having a thin film transistor  
15 and a pixel electrode electrically connected to the  
thin film transistor;

detecting a point defect pixel among the  
pixels;

20 separating the pixel electrode from the thin  
film transistor in the point defect pixel;

cutting the separated pixel electrode into two  
areas; and

coupling one of the two areas of the cut pixel  
electrode to a pixel electrode of an adjacent normal  
25 pixel, and coupling the other area of the cut pixel  
electrode to a pixel electrode of another adjacent  
normal pixel.

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8. The method according to claim 7, wherein each of  
the areas of the cut pixel electrode is coupled to  
the pixel electrode of the associated adjacent  
35 normal pixel by a metal connection.

9. The method according to claim 8, wherein the metal connection is formed by laser CVD.

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10. The method according to claim 7, wherein the pixel forming step includes patterning the pixel electrode into a shape defining orientation of liquid crystal, and the separated pixel electrode of the point defect pixel is cut into two areas along a domain boundary of the orientation of the liquid crystal.

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11. The method according to claim 7, wherein the detecting step includes inspecting a change in auxiliary capacitance of the pixels.

12. The method according to claim 7, further comprising the step of:  
assembling the thin film transistor array substrate into a vertical alignment type liquid crystal display.

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13. The method according to claim 7, further comprising the step of:  
assembling the thin film transistor array substrate into an in-plane switching type liquid

crystal display.